

**Medical Care Collection Fund (MCCF)  
Electronic Data Interchange (EDI)  
Transaction Applications Suite (TAS)  
eBilling Build 10/13**

**Integrated Billing IB\*2.0\*641**

**Deployment, Installation, Back-Out, and  
Rollback Guide**



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## Revision History

Date	Version	Description	Author
November 2020	1.0	National Release	Halfaker Dev Team

## Artifact Rationale

This document describes the Deployment, Installation, Back-out, and Rollback Plan for new products going into the VA Enterprise. The plan includes information about system support, issue tracking, escalation processes, and roles and responsibilities involved in all those activities. Its purpose is to provide clients, stakeholders, and support personnel with a smooth transition to the new product or software, and should be structured appropriately, to reflect particulars of these procedures at a single or at multiple locations.

Per the Veteran-focused Integrated Process (VIP) Guide, the Deployment, Installation, Back-out, and Rollback Plan is required to be completed prior to Critical Decision Point #2 (CD #2), with the expectation that it will be updated throughout the lifecycle of the project for each build, as needed.

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# 1 Introduction

This document describes how to deploy and install the patch IB\*2.0\*641, and how to back-out the product and rollback to a previous version or data set.

## 1.1 Purpose

The purpose of this plan is to provide a single, common document that describes how, when, where, and to whom the IB\*2.0\*641 will be deployed and installed, as well as how it is to be backed out and rolled back, if necessary. The plan identifies resources, communications plan, and rollout schedule. Specific instructions for installation, back-out, and rollback are included in this document.

## 1.2 Dependencies

- IB\*2.0\*623 must be installed **before** IB\*2.0\*641
- IB\*2.0\*659 must be installed **before** IB\*2.0\*641
- Deployment of Transaction Application Suite (TAS) 2.1.1
- VistALink 1.6 installed at VAMCs

## 1.3 Constraints

This patch is intended for a fully patched VistA system.

# 2 Roles and Responsibilities

**Table 1: Deployment, Installation, Back-out, and Rollback Roles and Responsibilities**

ID	Team	Phase / Role	Tasks	Project Phase (See Schedule)
1	VA OIT, VA OIT Health Product Support & PMO	Deployment	Plan and schedule deployment (including orchestration with vendors).	Planning
2	Local VAMC and CPAC processes	Deployment	Determine and document the roles and responsibilities of those involved in the deployment.	Planning
3	Field Testing (Initial Operating Capability - IOC), Health Product Support Testing & VIP Release Agent Approval	Deployment	Test for operational readiness.	Testing
4	Health Product Support and Field Operations	Deployment	Execute deployment.	Deployment

ID	Team	Phase / Role	Tasks	Project Phase (See Schedule)
5	Individual Veterans Administration Medical Centers (VAMCs)	Installation	Plan and schedule installation.	Deployment
6	VIP Release Agent	Installation	Ensure authority to operate and that certificate authority security documentation is in place.	Deployment
7	N/A for this patch as we are using only the existing VistA system	Installation	Validate through facility POC to ensure that IT equipment has been accepted using asset inventory processes.	
8	VA's eBusiness team	Installations	Coordinate training.	Deployment
9	VIP Release Agent, Health Product Support & the development team	Back-out	Confirm availability of back-out instructions and back-out strategy (what are the criteria that trigger a back-out).	Deployment
10	No changes to current process – we are using the existing VistA system	Post Deployment	Hardware, Software and System Support.	Warranty

### 3 Deployment

The deployment is planned as a national rollout.

This section provides the schedule and milestones for the deployment.

**NOTE:** *The VistA software needed for the FHIR transmission is installed in the OFF position. There will be a controlled implementation scheduled over a four-month period, and sites will be instructed when to turn FHIR ON.*

#### 3.1 Timeline

The deployment and installation are scheduled to run for 30 days starting with national release.

#### 3.2 Site Readiness Assessment

This section discusses the locations that will receive the IB\*2.0\*641 deployment.

##### 3.2.1 Deployment Topology (Targeted Architecture)

This patch IB\*2.0\*641 is to be nationally released to all VAMCs.

### 3.2.2 Site Information (Locations, Deployment Recipients)

The test sites for IOC testing are:

- Boston
- Chicago
- Martinez
- Orlando
- Richmond

Upon national release all VAMCs are expected to install this patch prior to or on the compliance date.

### 3.2.3 Site Preparation

The following table describes preparation required by the “TEST” site prior to deployment.

**Table 2: TEST Site Preparation**

Site / Other	Problem / Change Needed	Features to Adapt / Modify to New Product	Actions / Steps	Owner
Boston	Testers need to obtain access to the Test Environment(s).	N/A	Grant the assigned testers the necessary access to the Test Environment(s).	N/A
Chicago	Testers need to obtain access to the Test Environments.	N/A	Grant the assigned testers the necessary access to the Test Environment(s).	N/A
Martinez	Testers need to obtain access to the Test Environments.	N/A	Grant the assigned testers the necessary access to the Test Environment(s).	N/A
Orlando	Testers need to obtain access to the Test Environments.	N/A	Grant the assigned testers the necessary access to the Test Environment(s).	N/A
Richmond	Testers need to obtain access to the Test Environments.	N/A	Grant the assigned testers the necessary access to the Test Environment(s).	N/A

The following table describes preparation required by the site prior to deployment.

**Table 3: Site Preparation**

Site / Other	Problem / Change Needed	Features to Adapt / Modify to New Product	Actions / Steps	Owner
N/A	N/A	N/A	N/A	N/A

## 3.3 Resources

### 3.3.1 Facility Specifics

The following table lists facility-specific features required for deployment.

**Table 4: Facility-Specific Features**

Site	Space / Room	Features Needed	Other
N/A	N/A	N/A	N/A

### 3.3.2 Hardware

The following table describes hardware specifications required at each site prior to deployment.

**Table 5: Hardware Specifications**

Required Hardware	Model	Version	Configuration	Manufacturer	Other
Existing VistA system	N/A	N/A	N/A	N/A	N/A

Please see the Roles and Responsibilities table in Section 2 for details about who is responsible for preparing the site to meet these hardware specifications.

### 3.3.3 Software

The following table describes software specifications required at each site prior to deployment.

**Table 6: Software Specifications**

Required Software	Make	Version	Configuration	Manufacturer	Other
Fully patched Integrated Billing package within VistA	N/A	2.0	N/A	N/A	N/A
IB*2.0*659	N/A	Nationally released version	N/A	N/A	N/A
IB*2.0*623	N/A	Nationally released version	N/A	N/A	N/A
XOBV*1.6	N/A	1.6	N/A	N/A	N/A

Please see the Roles and Responsibilities table in Section 2 above for details about who is responsible for preparing the site to meet these software specifications.

### 3.3.4 Communications

The sites that are participating in field testing (IOC) will use the “Patch Tracking” message in Outlook to communicate with the eBilling eBusiness team, the developers, and product support personnel.



### 3.3.4.1 Deployment / Installation / Back-Out Checklist

The Release Management team will deploy the patch IB\*2.0\*641, which is tracked nationally for all VAMCs in the NPM in Forum. Forum automatically tracks the patches as they are installed in the different VAMC production systems. One can run a report in Forum to identify when the patch was installed in the VistA production at each site, and by whom. A report can also be run, to identify which sites have not currently installed the patch in their VistA production system.

Therefore, this information does not need to be manually tracked in the chart below:

**Table 7: Deployment / Installation / Back-Out Checklist**

Activity	Day	Time	Individual who completed task
Deploy	N/A	N/A	N/A
Install	N/A	N/A	N/A

## 4 Installation

### 4.1 Pre-installation and System Requirements

IB\*2.0\*641, a patch to the existing VistA Integrated Billing 2.0 package, is installable on a fully patched M(UMPS) VistA system and operates on the top of the VistA environment provided by the VistA infrastructure packages. The latter provides utilities which communicate with the underlying operating system and hardware, thereby providing Integrated Billing independence from variations in hardware and operating system.

### 4.2 Platform Installation and Preparation

Refer to the IB\*2.0\*641 documentation on the National Patch Module (NPM) in Forum for the detailed installation instructions. These instructions would include any pre-installation steps if applicable.

### 4.3 Download and Extract Files

Refer to the IB\*2.0\*641 documentation on the NPM to find related documentation that can be downloaded. IB\*2.0\*641 will be transmitted via a PackMan message and can be pulled from the NPM. It is not a host file, and therefore does not need to be downloaded separately.

### 4.4 Database Creation

IB\*2.0\*641 modifies the VistA database. All changes can be found on the NPM documentation for this patch.

### 4.5 Installation Scripts

No installation scripts are needed for IB\*2.0\*641 installation.

## **4.6 Cron Scripts**

No Cron scripts are needed for IB\*2.0\*641 installation.

## **4.7 Access Requirements and Skills Needed for the Installation**

The following staff will need access to the PackMan message containing the IB\*2.0\*641 patch or to Forum's NPM for downloading the nationally released IB\*2.0\*641 patch. The software is to be installed by the site's or region's designated: VA OIT IT OPERATIONS SERVICE, Enterprise Service Lines, VistA Applications Division<sup>1</sup>.

## **4.8 Installation Procedure**

Refer to the IB\*2.0\*641 documentation on the NPM for detailed installation instructions.

## **4.9 Installation Verification Procedure**

Refer to the IB\*2.0\*641 documentation on the NPM for specific and detailed installation instructions. These instructions include any post installation steps if applicable.

## **4.10 System Configuration**

No system configuration changes are required for this patch.

## **4.11 Database Tuning**

No reconfiguration of the VistA database, memory allocations or other resources is necessary.

# **5 Back-Out Procedure**

Back-Out pertains to a return to the last known good operational state of the software and appropriate platform settings.

## **5.1 Back-Out Strategy**

Although it is unlikely due to care in collecting, elaborating, and designing approved user stories, followed by multiple testing stages (Developer Unit Testing, Component Integration Testing, SQA Testing, and User Acceptance Testing), a back-out decision due to major issues with this patch could occur. A decision to back out could be made during site Mirror Testing, Site Production Testing, or after National Release to the field (VAMCs). The best strategy decision is dependent on the stage of testing during which the decision is made.

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<sup>1</sup> "Enterprise service lines, VAD" for short. Formerly known as the IRM (Information Resources Management) or IT support.

### **5.1.1 Mirror Testing or Site Production Testing**

If during Mirror testing or Site Production Testing, a new version of a defect correcting test patch is produced, retested, and successfully passes development team testing, it will be resubmitted to the site for testing. If the patch produces catastrophic problems, a new version of the patch can be used to restore the build components to their pre-patch condition.

### **5.1.2 After National Release but During the Designated Support Period**

If the defect(s) were not discovered until after national release but during the designated support period, a new patch will be entered into the National Patch Module in Forum and will go through all the necessary milestone reviews etc., as a patch for a patch. It is up to VA OIT and product support whether this new patch would be defined as an emergency patch or not. This new patch could be used to address specific issues pertaining to the original patch or be used to restore the build components to their original pre-patch condition.

### **5.1.3 After National Release and Warranty Period**

After the support period, the VistA Maintenance Program would produce the new patch either to correct the defective components or restore the build components to their original pre-patch condition.

## **5.2 Back-Out Considerations**

It is necessary to determine if a wholesale back-out of the patch IB\*2.0\*641 is needed or if a better course of action is needed to correct through a new version of the patch (if prior to national release) or a subsequent patch aimed at specific areas modified or affected by the original patch (after national release). A wholesale back-out of the patch will still require a new version (if prior to national release) or a subsequent patch (after national release). If the back-out is post-release of patch IB\*2.0\*641, this patch should be assigned status of “Entered in Error” in Forum’s NPM.

### **5.2.1 Load Testing**

N/A. The back-out process would be executed at normal, rather than raised job priority, and is expected to have no significant effect on total system performance. Subsequent to the reversion, the performance demands on the system would be unchanged.

### **5.2.2 User Acceptance Testing**

The following modifications have been made to the transmission process of the 837-transaction using the new Transaction Application Suite (TAS) technology platform:

- Propriety Health Care Claim: Professional, Institutional, Dental transactions will be created using FHIR (Fast Healthcare Interoperability Resources) and transmitted to FSC.
- The HL7 FHIR transaction data is available to the Integrated Billing (IB) personnel via VistA.

**NOTE:** *The VistA software needed for the FHIR transmission is installed in the OFF position. There will be a controlled implementation scheduled over a four-month period, and sites will be instructed when to turn FHIR ON.*

#### Claims Status Awaiting Resolution:

Modified Claims Status Awaiting Resolution [IBCE CLAIMS STATUS AWAITING] to display a warning to billers who attempt to resubmit previously rejected claims on the CSA worklist without making any changes using one of the following actions from the worklist:

- Resubmit by Print
- Retransmit Bill
- Print Bill

Created Resubmission / Printing Claims No Changes CSA Report [IBCE RESUB FROM CSA RPT] for authorized users holding the IB SUPERVISOR KEY providing information on previously rejected claims that were resubmitted without any changes.

Enter / Edit Billing Information [IB EDIT BILLING INFO]:

- Added fatal edit to require Place of Service on professional claims.
- Added fatal edit to require at least one nonzero-dollar revenue code present on a claim.

Enhancements to EDI Claim Status Report [IBCED EDI CLAIM STATUS REPORT] to allow a summary option to the previous detail report.

Skilled Nursing Facility (SNF) claims:

- Enhanced VistA to use the STATEMENT COVERS FROM (#151) field rather than EVENT DATE (#.03) field in the BILL / CLAIMS (#399) file as Date of Service when determining which VA specific Resource Utilization Group / Health Insurance Prospective Payment System (RUG / HIPPS) Skilled Nursing Facility (SNF) code - 'ZZZZZ' or 'AAA00' - for Medicare primary institutional Part A claims with Bill Type equals to 21x, 22x, or 23x with Revenue code 0022. 'ZZZZZ' should be sent for statement from dates on or after 10/1/2019.

## 5.3 Back-Out Criteria

The project is canceled, the requested changes implemented by IB\*2.0\*641 are no longer desired by VA OIT and the Integrated Billing eBusiness team, or the patch produces catastrophic problems.

## 5.4 Back-Out Risks

Since the eBilling software is tightly integrated with external systems, any attempt at a back-out should include close consultation with the external trading partners such as the Financial Services Center (FSC) and the Health Care Clearing House (HCCH) to determine risk.

## 5.5 Authority for Back-Out

The order would come from: Application Coordinator (Health Services Portfolio), Portfolio Director and Enterprise Portfolio Management Division (EPMD). This should be done in consultation with the development team and external trading partners such as FSC and the HCCH to determine the appropriate course of action. eBilling is tightly integrated with these external partners and a back-out of the patch should not be a standalone decision.

## 5.6 Back-Out Procedure

The back-out procedure for VistA applications is complex and not a “one size fits all” solution. The general strategy for a VistA back-out is to repair the code with a follow-up patch. The development team recommends that sites log a ticket if it is a nationally released patch. If not, the site should contact the Enterprise Portfolio Management Division (EPMD) directly for specific solutions to their unique problems.

The IB\*2.0\*641 patch contains the following build components.

- Routines
- Options
- Data Dictionary Changes - Modifications to the following files:
  - BILL STATUS MESSAGE [#361]
  - EDI TRANSMISSION BATCH [#364.1]

While the VistA installation procedure of the KIDS build allows the installer to back up the modified routines using the ‘Backup a Transport Global’ action, the back-out procedure for global, data dictionary, and other VistA components is more complex and requires issuance of a follow-up patch to ensure all components are properly removed and / or restored. All software components (routines and other items) must be restored to their previous state at the same time and in conjunction with the restoration of the data.

Please contact the EPMD team for assistance since this installed patch contains components in addition to routines.

## 5.7 Back-out Verification Procedure

Successful back-out is confirmed by verification that the back-out patch was successfully installed.

# 6 Rollback Procedure

Rollback pertains to data. The only data changes in this patch are specific to the operational software and platform settings. These data changes are covered in the Back-out procedures detailed elsewhere in this document.

## 6.1 Rollback Considerations

Not applicable.

## **6.2 Rollback Criteria**

Not applicable.

## **6.3 Rollback Risks**

Not applicable.

## **6.4 Authority for Rollback**

Not applicable.

## **6.5 Rollback Procedure**

Not applicable.

## **6.6 Rollback Verification Procedure**

Not applicable.